DOCUMENT RESUME

ED 280 865 TM 870 192

AUTHOR Athanasou, James A.
TITLE Administration and Scoring of the Vocational Interest Survey. Information Paper.
INSTITUTION New South Wales Dept. of Industrial Relations and Employment, Darlinghurst (Australia). Human Resources Div.
REPORT NO ISBN-0-7305-2084-6
PUB DATE Oct 86
NOTE 12p.; For related documents, see TM 970 190-193.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Careers; Foreign Countries; High Schools; *Interest Inventories; Measurement Techniques; *Norms; Occupations; *Questionnaires; Rating Scales; Scores; *Scoring; Surveys; *Testing; *Vocational Interests
IDENTIFIERS Australia (New South Wales); Relative Preference Index; *Vocational Interest Survey

ABSTRACT

The Vocational Interest Survey (VIS) is a set of six questionnaires for measuring vocational interests. It is designed to be used in career counseling with persons 15 years and over, who want to explore and understand their vocational interests. Completion of this inventory requires: (1) active participation of respondents, (2) a setting where individuals can concentrate, and (3) an understanding of the goal of this assessment. The purpose of this paper is to outline some aspects of the administration and scoring of the VIS, with special emphasis on the relative preference index. The VIS comes with instructions for administering and completing the survey. The reading level for the instructions is estimated to be at year 5/6 level. The VIS is designed to be essentially self-scoring. The procedure for computing raw scores is the same for all scales. Based on a sample of 2,459 men and women, combined-sex norms were developed as percentile ranks for each of the six scales. The Relative Preference Index (RPI) is used to make statements about a client's level of preference on each subscale. The RPI is a variation of a mastery score that shows quantity of preference. It describes the level of performance rather than the relative standing in a group. It is cautioned that any questionnaire should be employed as only one aspect of the vocational guidance process. (JAZ)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ISBN 0-7305-2084-6

ED280865

INFORMATION PAPER

ADMINISTRATION & SCORING OF THE VOCATIONAL INTEREST SURVEY

James A. Athanasou

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J Athanasou

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

INFORMATION & POLICY UNIT
HUMAN RESOURCES DIVISION
NSW DEPARTMENT OF INDUSTRIAL RELATIONS AND EMPLOYMENT

October, 1986

TM 870192

ADMINISTRATION AND SCORING OF THE VOCATIONAL INTEREST SURVEY

The Vocational Interest Survey (VIS) is designed for persons 15 years and over, who want to explore and understand their vocational interests. Completion of this inventory requires the active participation of respondents, a setting where individuals can concentrate, and an understanding of the purpose of this assessment.

The purpose of this paper is to outline some aspects of the administration and scoring of the VIS, with special emphasis on the relative preference index. An earlier report has provided an overview of the VIS (Athanasou, 1986), and details of the development of the scale have been outlined (Athanasou 1986b).

Instructions

Instructions for administering the VIS are straightforward. The reading level for the instructions was estimated using Fry's readability formula (Fry, 1963) to be at Year 5/6 level. If it is considered necessary, the test administrator may read aloud the instructions printed in the test booklet. No attempt is made to disguise the purpose of the survey, since it is intended mainly for use in career education, guidance and counselling.

The following instructions may be used to introduce the VIS:

"This survey is used to help you understand your interests. The following pages list many jobs, activities, school subjects, etc for you to look at. You are asked to tick only those that you like. Some of the activities or jobs listed will come under more than one heading. This is because there are some things you can work at, or study as well as take up in your spare time. Work as quickly as you can. First impressions always give the best results with this survey. Most people find it easy to complete. At the end you will be asked to add up your scores, and you will be given a copy of the results. Thank you for your help."

Clients are asked to complete details of their name, address etc on the front cover and to turn over to page 4 to commence the "Practical" scale. A list of occupations and courses with definitions and explanations is also provided to assist respondents.

Scoring

The VIS is designed to be essentially self-scoring. The procedure for computing raw scores is the same for all scales.

Responses are scored 1=Like, 0=Dislike. The number of items ticked in each scale is merely added by the client or the examiner to produce the total scale score. To avoid error, client's scoring should be supervised or checked. Scale totals are then transferred to a table of norms to determine the highest relative interests.

In order to ensure that all clients understand what to do, it may be necessary to supplement the instructions with informal directions. For instance, it may be useful to explain the purpose and rationale of the survey and how the results are used. On the other hand, there is often a need to emphasise specific details such as the fact that:-

a) clients can tick as many items or as few as they want;

b) they should tick what they like, not what they can do;

c) it is not a problem if they have many preferences in one category and/or none in some other categories;

Norms

The norms for scales such as the VIS provide reference information to which someone's performance can be compared and evaluated. Raw scores cannot be used to compare performances since each scale has a different number of items.

Combined-sex norms are available as percentile ranks for each of the six scales (see Table 1). These results are based on a sample of 2459 (1159 women, 1300 men) from seventeen metropolitan and country high schools, vocational counselling applicants and technical college students.

The percentile ranks are statements concerning the relative standing on each scale. They indicate the percentage of subjects in the norming sample who had scores the same as or lower than the subject's

TABLE 1

VOCATIONAL INTEREST SURVEY
NORMATIVE DATA: MALES & FEMALES (N=2459)

PRACTICAL		SCIENTIFIC		ARTISTIC		SOCIAL		BUSINESS		CLERICAL	
Raw Score	% Rank	Raw Score	% Rank	Raw Score	% Rank	Raw Score	% Rank	Raw Score	% Rank	Raw Score	% Rank
46 +	99+	26+	99+	33+	99+	36-39	99+	18 +	99+	22+	99+
43-45	99	25	99	32	99	35	99	17	99	21	99
38-42	98	23-24	98	30-31	98	33-34	98	16	98	19-20	98
34-37	97	21-22	97	29	97	31-32	97	15	97	18	97
32-33	96	20	96	27-28	96	30	96	14	96	17	96
31	95	19	94	26	95	29	94	13	94	16	95
30	94	18	93	25	94	28	93	12	91	15	94
29	93	17	91	24	93	27	92	11	88	14	92
28	92	16	89	23	92	26	90	10	84	13	89
27	91	15	86	22	91	25	88	9	80	12	87
26	90	14	83	21	89	24	87	8	75	11	84
25	89	13	80	20	88	23	85	7	68	10	80
24	88	12	77	19	86	22	83	6	60	9	76
23	86	11	72	18	84	21	81	5	51	8	71
22	85	10	67	17	82	20	78	4	42	7	64
21	83	9	61	16	79	19	75	3	31	6	57
20	81	8	55	15	76	18	72	2	21	5	49
19	79	7	50	14	73	17	69	1	14	4	40
18	77	6	43	13	70	16	66	0	5	3	31
17	75	5	36	12	67	15	63			2	24
16	73	4	29	11	62	14	59			1	18
15	70	3	21	10	58	13	55			0	8
14	68	2	13	9	53	12	51				
13	65	1	8	8	47	11	48				
12	61	0	3	7	41	10	44				
11	58			6	36	9	41				
10	55			5	29	8	37				
9	52			4	23	7	33				
8	48			3	16	6	28				
7	44			2	10	5	24				
6	39			1	6	4	20				
5	35			0	2	3	15				
4	29					2	11				
3	23					1	7				
2	16					0	2				
1	10										
0	3										

score. It should be emphasised that standing at the fiftieth percentile can mean quite different things, depending on the nature of the normative sample - men, women, high school students, employees, applicants, or guidance clients. Furthermore, users are cautioned not to interpret differences in percentile ranks as absolute differences in level of interest. That is, one cannot always say that the 80% ile rank on Practical means a greater interest than say a 50% ile rank on Scientific. All that can be interpreted is "that the interest in Practical relative to the population is at a higher level than the relative interest in Social."

The Table 2 below provides a standarised set of verbal descriptions, for rating performance on each scale.

TABLE 2: VERBAL DESCRIPTIONS CORRESPONDING TO RAW SCORES ON THE VIS SUB-SCALES

	Very Low (≤2%)	Low (3 -9%)	Low Average (10-25%)	Average (26-75%)	High Average (76-90%)	High (92-98%)	Very High (≥99%)
PRACTICAL	-	0	1-3	4-17	18-27	28-42	43+
SCIENTIFIC	-	0-1	2-3	4-11	12-17	18-24	26+
ARTISTIC	0	1	2-4	5-14	15-22	23-31	32+
SOCIAL	0	1	2-5	6-19	20-26	27-34	35+
BUSINESS	-	0	1-2	3-8	9-12	13-16	17+
CLERICAL	-	0	1-2	3-8	9-13	14-20	21+

Additional normative data for women and men separately are listed below in Tables 3 and 4.

TABLE 3 VOCATIONAL INTEREST SURVEY - ABBREVIATED
NORMATIVE DATA: WOMEN (N=1159)

% Rank	Practical	Scientific	Artistic	Social	Business	Clerical
99+	34+	29+	36+	38+	17+	23+
91-99	13-33	17-28	25-35	30-37	11-16	16-22
81-90	9-12	14-16	20-24	26-29	9-10	12-15
71-80	7-8	11-13	16-19	23-25	7-8	10-11
61-70	5-6	10	14-15	20-22	6	8-9
51-60	4	8-9	11-13	18-19	5	6-7
41-50	3	6-7	9-10	16-17	4	5
31-40	2	5	8	14-15	3	4
21-30	-	4	6-7	11-13	2	2-3
11-20	1	2-3	4-5	8-10	1	1
1-10	0	0-1	0-3	0-7	0	0

TABLE 4 VOCATIONAL INTEREST SURVEY - ABBREVIATED
NORMATIVE DATA: MEN (N=1300)

% Rank	Practical	Scientific	Artistic	Social	Business	Clerical
99+	53+	29+	33+	32+	19	22+
91-99	31-52	17-28	18-32	19-31	13-18	12-21
81-90	25-30	13-16	13-17	14-18	10-12	9-11
71-80	21-24	11-12	11-12	11-13	8-9	7-8
61-70	19-20	9-10	9-10	9-10	7	6
51-60	16-18	7-8	7-8	7-8	6	5
41-50	13-15	6	6	5-6	5	4
31-40	11-12	5	5	4	4	3
21-30	8-10	3-4	3-4	3	3	2
11-20	5-7	2	2	1-2	1-2	1
1-10	0-4	0-1	0-1	0	0	0

Relative Preference Index (RPI)

The Relative Preference Index allows statements to be made about a client's level of preference on each subscale. The RPI is a variation of a mastery score that shows quantity of preference.

It is determined by the proportion of items ticked in each sub-scale out of the total number of items in that scale. For instance, if a client ticks 20 out of the 40 items in the Artistic scale, then their RPI would be 0.50 (ie 20/40 = 0.50).

The RPI describes the level of preference and not the relative standing in a group. If the population changes (e.g. combined or male or female norms) the percentile rank will change but the relative preference will have a constant meaning.

The RPI can also be used as a basis for inter-scale comparison. That is, the user can examine the client's profile to determine the rank order of relative preferences. In this way, there is an in-built control for acquiescence and level of responding. The information provided by the RPI is a useful supplement to the normative comparisons provided by percentile ranks.

A chart for determining the RPI for each scale is provided below in Table 5, together with an example of its calculation and use.

Conclusions

The VIS provides a record of six important career interests for use in careers counselling. The accuracy of the information from this survey is dependent upon the motivations of the person completing the survey, the extent to which the items are a fair sample of the categories, and the professional administration and scoring of the scales.

The use of scores which can indicate either a person's relative level of interest or absolute level should be of assistance to users.

The use of an inventory is recommended as only one aspect of the vocational guidance process. Additional information on interests should be based on stated vocational choices, leisure interests, self-estimates of interests, knowledge and information. Such background information should be used to confirm the results of any interest questionnaire, and users are cautioned not to accept questionnaire scores at face value, but rather as one indication of vocational interests. The advantage of the questionnaires like the VIS, is that they provide a standardized set of questions, which have been determined objectively for use in career guidance.

Example of the calculation of the Relative Preference Index

Client	: Female 16 years Student
First Language	: English
Referral	: Career guidance and choice of high school subjects
Leisure Activities	: Violin, singing, squash, friends
Occupational Choice	: Professional singer, songwriter
Counsellor's Comments	: " ... intellectually capable person with the potential to achieve at a tertiary level. Her school performances are some 10-25% below her expected level of achievement..."

Other Test Results

Full-Scale I.Q	= 107
Verbal I. Q	= 117
Performance I. Q	= 95
Verbal Reasoning	= 77% ile
Quantitative Reasoning	= 71% ile
Reading Age	= 16.10 (Normal achievement)

Personality

Extraversion	= 4.3 (Sten score)
Anxiety	= 5.7
Tough Poise	= 3.6
Independence	= 6.4

Interests

Practical	= 34% ile
Scientific	= 44 "
Artistic	= 61 "
Social	= 81 "
Business	= 5 "
Clerical	= 52 "

Calculation of RPI

Scale	No. of Items	Raw Score	RPI	Rank Order	Percentile Rank
Practical	(65)	4	4/65= 0.06	5	34%
Scientific	(35)	6	6/35= 0.17	4	44%
Artistic	(40)	11	11/40= 0.27	2	61%
Social	(39)	22	22/39= 0.56	1	81%
Business	(19)	0	0/19= 0	6	5%
Clerical	(24)	6	6/24= 0.25	3	52%

Acquiescence = 49 (Average)
Differentiation = H-L = 81 - 5 = 76% (High)

TABLE 5 RELATIVE PREFERENCE INDEX FOR EACH VIS SCALE

Raw Score	R	I	A	S	E	C
65	1.00					
64	.98					
63	.97					
62	.95					
61	.94					
60	.92					
59	.91					
58	.89					
57	.88					
56	.86					
55	.85					
54	.83					
53	.82					
52	.80					
51	.78					
50	.77					
49	.75					
48	.74					
47	.72					
46	.71					
45	.69					
44	.68					
43	.66					
42	.65					
41	.63					
40	.62		1.00			

Raw Score	R	I	A	S	E	C
39	.60		.98	1.00		
38	.58		.95	.97		
37	.57		.93	.95		
36	.55		.90	.92		
35	.54	1.00	.88	.90		
34	.52	.97	.85	.87		
33	.51	.94	.83	.85		
32	.49	.91	.80	.82		
31	.48	.89	.78	.79		
30	.46	.86	.75	.77		
29	.45	.83	.73	.74		
28	.43	.80	.70	.72		
27	.42	.77	.68	.69		
26	.40	.74	.65	.67		
25	.38	.71	.63	.64		
24	.37	.69	.60	.62		1.00
23	.35	.66	.58	.59		.96
22	.34	.63	.55	.56		.92
21	.32	.60	.53	.54		.88
20	.31	.57	.50	.51		.83
19	.29	.54	.48	.49	1.00	.79
18	.28	.51	.45	.46	.95	.75
17	.26	.49	.43	.44	.89	.71
16	.25	.46	.40	.41	.84	.67
15	.23	.43	.38	.38	.79	.63
14	.22	.40	.35	.36	.74	.58

Raw Score	R	I	A	S	E	C
13	.20	.37	.33	.33	.68	.54
12	.18	.34	.30	.31	.63	.50
11	.17	.31	.28	.28	.58	.46
10	.15	.29	.25	.26	.53	.42
9	.14	.26	.23	.23	.47	.38
8	.12	.23	.20	.21	.42	.33
7	.11	.20	.18	.18	.37	.29
6	.09	.17	.15	.15	.32	.25
5	.08	.14	.13	.13	.26	.21
4	.06	.11	.10	.10	.21	.17
3	.05	.09	.08	.08	.16	.13
2	.03	.06	.05	.05	.11	.08
1	.02	.03	.03	.03	.05	.04
0	0	0	0	0	0	0

REFERENCES:

Athanasou, J.A. (1986) Six experimental scales for the measurement of Holland's vocational typology. In Lokan, J. & Taylor, K. (eds.). Holland in Australia, Melbourne: Australian Council for Educational Research.

Athanasou, J.A. (1986b) An overview of the Vocational Interest Survey. Sydney: N.S.W. Department of Industrial Relations (ISBN 0-7305-2076-5).

Fry, E.B. (1963) Teaching master reading: A manual. Cambridge The University Press.